

## **REMARKS**

Applicant respectfully thanks the Examiner for the consideration provided to this application, and respectfully requests reconsideration of this application.

Claims 13-15 and 39-41 are now pending in this application. Each of claims 13 and 15 is in independent form.

### **I. The Obviousness Rejections**

Each of claims 13-15 and 39-41 was rejected under 35 U.S.C. 103(a) as being obvious, and thus unpatentable, over various combinations of U.S. Patent 5,430,485 (“Lankford”), U.S. Patent 6,243,645 (“Moteki”), U.S. Patent 5,820,463 (“O’Callaghan”) and/or U.S. Patent 6,243,030 (“Levine”).

Each of these rejections is respectfully traversed.

#### **A. Legal Standards**

##### **1. Overview of *Prima Facie* Criteria for an Obviousness Rejection**

The Patent Act, namely, 35 U.S.C. 103, forbids issuance of a patent when “the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art.”

Relatively recently, in *KSR International Co. v. Teleflex, Inc.*, 550 U.S. 398 (2007), the Supreme Court interpreted this law while highlighting the typical invention process.

“**Inventions** usually rely upon building blocks long since uncovered, and claimed discoveries **almost necessarily will be combinations** of what, in some sense, is already known” (emphasis added). Yet, to properly apply §103, the Court recognized the need to filter, via obviousness analyses, true inventions from mere ordinary technological advances. “Granting patent protection to advances that **would occur in the ordinary course** without real innovation retards progress and may, in the case of patents combining previously known elements, deprive prior inventions of their value or utility” (emphasis added).

Obviousness is a legal question based on underlying factual findings. *In re Gartside*, 203 F.3d 1305, 1316 (Fed. Cir. 2000). In *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), the Supreme Court established factors regarding the factual inquiry required to establish obviousness. The factors include:

1. determining the scope and contents of the prior art;
2. ascertaining differences between the prior art and the claims at issue;
3. resolving the level of ordinary skill in the pertinent art; and
4. considering objective evidence indicating obviousness or nonobviousness.

Thus, factual determinations include, *inter alia*, the scope and content of the prior art, the level of skill in the art at the time of the invention, the objective evidence of nonobviousness, the presence or absence of a reason to combine, and whether a reference constitutes analogous prior art. See *In re Biggio*, 381 F.3d 1320, 1324 (Fed. Cir. 2004); *Gartside*, 203 F.3d at 1316; *Para-Ordinance Mfg. v. SGS Imps. Int'l.*, 73 F.3d 1085, 1088 (Fed. Cir. 1995); *In re GPAC, Inc.*, 57 F.3d 1573, 1577 (Fed. Cir. 1995). “What the prior art teaches and whether it teaches toward or away from the claimed invention also is a determination of fact.” *Para Ordinance Mfg.*, 73 F.3d at 1088 (*citing In re Bell*, 991 F.2d 781, 784 (Fed. Cir. 1993)).

*KSR* warned that “a patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art”. Instead, “[i]n determining whether the invention as a whole would have been obvious under 35 U.S.C. 103, we must first delineate the invention as a whole. In delineating the invention as a whole, we look not only to the subject matter which is literally recited in the claim in question... but also to those properties of the subject matter which are inherent in the subject matter and are disclosed in the specification. . . Just as we look to a chemical and its properties when we examine the obviousness of a composition of matter claim, it is this invention **as a whole**, and not some part of it, which must be obvious under 35 U.S.C. 103.” *In re Antonie*, 559 F.2d 618, 620, 195 USPQ 6,8 (CCPA 1977) (emphasis in original).

*KSR* further explained that any proposed combinations of prior art can only support a finding of obviousness if “there was an apparent reason to combine the known elements in the way” claimed. If that proposed combination involves multiple patents”, those patents must provide “interrelated teachings”. *KSR* further clarified that the “[t]he question is not whether the

combination was obvious to the patentee but whether the combination was obvious to a person with ordinary skill in the art”. Thus, in determining obviousness, both *KSR* and *Graham* warned against a “temptation to read into the prior art the teachings of the invention in issue” and instructed to “guard against slipping into the use of hindsight”.

To effectively guard against hindsight, *KSR* emphasized the “import[ance]” of “identify[ing] **a reason that would have prompted** a person of ordinary skill in the relevant field to combine the elements **in the way the claimed new invention does**” (emphasis added). That is, “rejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some **articulated reasoning** with some rational underpinning to support the legal conclusion of obviousness” (*quoting In re Kahn*, 441 F. 3d 977, 988 (Fed. Cir. 2006) (emphasis added)). Thus, “[t]o facilitate review, this analysis should be made explicit”.

Explaining the need for “**a reason that would have prompted** a person of ordinary skill”, *KSR* further taught that “if a **technique** has been used **to improve** one device, and a person of ordinary skill in the art **would recognize** that it would improve similar devices in the same **way**, using the technique is obvious unless its actual application is beyond his or her skill” (emphasis added). Further exploring this mandate, the Federal Circuit has held that “knowledge of a problem and motivation to solve it are entirely different from motivation to combine particular references”. *Innogenetics v. Abbott Laboratories* (Fed. Cir. 2007-1145) (8 January 2008).

Thus, according to the Supreme Court, a proper obviousness rejection must “identify **a reason that would have prompted** a person of ordinary skill in the relevant field **to combine** the elements **in the way the claimed new invention does**” and must present substantial evidence that one of ordinary skill **would** recognize that alleged reason for making the particular claimed combination. It follows that if the alleged reason for making the particular combination of features is not evidenced to be art-recognized, then that reason **must be** based on hindsight.

In addition to establishing a proper reason to combine, a proper obviousness rejection must clearly identify proposed reference(s) that:

1. are pertinent;
2. provide a reasonable expectation of success; and
3. teach... all the claim limitations

*See* MPEP 2143; MPEP 2143.03, *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991); and additional citations *infra*.

The Federal Circuit has further held that “[w]hen there is a design need or market pressure to solve a problem”, obviousness is not supported unless “a finite, and in the context of the art, small or easily traversed, number of options” “**would** convince an ordinarily skilled artisan of obviousness”. *Ortho-McNeil Pharmaceutical Inc. v. Mylan Laboratories Inc.*, 520 F.3d 1358 (Fed. Cir. 2008).

Consistent with other patentability rejections, to establish a *prima facie* case of obviousness, substantial evidence must be provided that fulfills the mandates of the applicable law. The “Patent Office has the initial duty of supplying the factual basis for its rejection.” *In re Warner*, 379 F.2d 1011, 154 USPQ 173, 178 (CCPA 1967), *cert. denied*, 389 U.S. 1057, *reh’g denied*, 390 U.S. 1000 (1968). “It may not... resort to speculation, unfounded assumptions or hindsight reconstruction to supply deficiencies in its factual basis”. *Id.*

Moreover, it is legal error to “substitute[] supposed *per se* rules for the particularized inquiry required by section 103. It necessarily produces erroneous results.” *See, In re Ochiai*, 71 F.3d 1565, 1571, 37 USPQ2d 1127, 1132-33 (Fed. Cir. 1998); *In re Wright*, 343 F.2d 761, 769-770, 145 USPQ 182, 190 (CCPA 1965).

Only when “the examiner... carries the burden of making out a *prima facie* case of unpatentability, [does] ‘the burden of coming forward with evidence or argument shift[] to the applicant.’” *In re Alton*, 76 F.3d 1168, 37 USPQ2d 1578 (Fed. Cir. 1996) (*quoting In re Oetiker*, 977 F.2d at 1445, 24 USPQ2d at 1444).

## **2. Maintenance of Design and Principle of Operation of Reference(s)**

If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. MPEP 2143.01(VI). *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959).

A suggested combination of references must not require a substantial reconstruction and redesign of the elements shown in the a reference or a change in the basic principle under which a reference was designed to operate.” *In re Ratti*, 270 F.2d 810, 813, 123 USPQ 349, 352 (CCPA 1959).

### **3. The Applied Reference(s) Must Present All Claim Limitations**

“To establish a *prima facie* case of obviousness... the prior art reference (or references when combined) must teach or suggest all the claim limitations.” MPEP 2143.

The proposed modification or combination must provide the structure recited in the claims and produce the result attained by that structure. *See In re Schulpen*, 390 F.2d 1009 (C.C.P.A., 1968).

### **4. Next Office Action**

If an Office Action fails to set forth sufficient facts to provide a *prima facie* basis for the rejections, any future rejection based on the applied reference will necessarily be factually based on an entirely different portion of that reference, and thus will be legally defined as a “new grounds of rejection.” Consequently, any Office Action containing such rejection can not properly be made final. *See, In re Wiechert*, 152 USPQ 247, 251-52 (CCPA 1967) (defining “new ground of rejection” and requiring that “when a rejection is factually based on an entirely different portion of an existing reference the appellant should be afforded an opportunity to make a showing of unobviousness vis-a-vis such portion of the reference”), and *In re Warner*, 379 F.2d 1011, 154 USPQ 173, 178 (CCPA 1967) (the USPTO “has the initial duty of supplying the factual basis for its rejection”).

## **B. Analysis**

### **1. All Claims**

#### **a. Characterizations of the Claimed Subject Matter**

To the extent that any past Office Action, the present Office Action, or any future Office Action attempts to characterize the subject matter of any claim without quoting the actual language of that claim, Applicant respectfully traverses.

**a. Maintenance of Design and Principle of Operation of Lankford**

The present Office Action, regarding the rejection of each of claims 13 and 15, from one of which each of claims 14 and 39-41 ultimately depends, asserts on page 4 and page 7 that “[i]t would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the delay to one half of a difference between the first delay time and the second delay time”. However, Applicant respectfully submits that modifying Lankford such that “the delay” is “one half of a difference between the first delay time and the second delay time” would fundamentally change the principle of operation of Lankford.

Lankford discloses that “[t]wo mechanisms may be used to adjust the A/V synchronization based upon the error signal”, namely “skips and repeats” and “conversion clock deviation”. A person having ordinary skill in the art would know that “conversion clock deviation” deals with “variation of the audio conversion clock frequency” and is therefore well outside of the scope of the claimed subject matter. Lankford describes the remaining method, “skips and repeats”, by allegedly teaching “skipping **fixed intervals or ‘frames’**” and “repeating...**fixed intervals**” (column 6, lines 47-67, emphasis added). Lankford further describes that “[a]fter skipping or repeating a frame, the system iterates back to the start position” (column 7, lines 41-43). This “iterat[ion]” is continues until “an indication that the system is converging toward synchronization” (column 7, lines 49-50).

Applicant respectfully submits that a modification to Lankford, as proposed in the present Office Action, to “introduc[e] a relative delay” equal to “one half of a difference between the first delay time and the second delay time” as claimed, would eliminate both the “iterat[ion]” and “converg[ence]” principle of Lankford. Indeed, the method of Lankford does not disclose or utilize any “delay”, but rather an “iterat[ed]” “skipping” or “repeating” of “fixed intervals” until “converg[ence]”. Consequently, reconsideration and withdrawal of any rejection based on this modification of Lankford is respectfully requested.

**b. Missing Claim Limitations**

Each of independent claims 13 and 15, from one of which each of claims 14 and 39-41 ultimately depends, states, *inter alia*, yet no substantial evidence has been presented that the applied portions of the cited references teach (i.e., disclose and/or enable), alone or in combination, “introducing a relative delay to whichever of the first complementary data stream and the second complementary data stream corresponds to a shorter delay time of the first delay time and the second delay time, the relative delay being one half of a difference between the first delay time and the second delay time”. Indeed, as stated above, Lankford does not disclose and/or teach **any** “delay”, but rather an “iterat[ed]” “skipping” or “repeating” of “fixed intervals” until “converg[ence]”. Therefore, no amount of experimentation regarding Lankford would lead a person having ordinary skill in the art to any “delay being one half of a difference between the first delay time and the second delay time”.

Thus, even if there were proper evidence of obviousness presented in the Office Action (an assumption that is respectfully traversed), and even if there were a reasonable expectation of success in combining or modifying the applied portions of the references relied upon in the Office Action (another assumption that is respectfully traversed), no substantial evidence has been presented the applied portions of the references relied upon in the Office Action, **as attempted to be modified and/or combined**, expressly or inherently teach **every** limitation of the independent claims, and consequently the Office Action fails to establish a *prima facie* case of obviousness. Consequently, for at least the reasons mentioned above, reconsideration and withdrawal of these rejections is respectfully requested.

**CONCLUSION**

It is respectfully submitted that the application is in clear condition for allowance. Reconsideration, withdrawal of all grounds of rejection, and issuance of a Notice of Allowance are earnestly solicited.

The Office is hereby authorized to charge any additional fees or credit any overpayments under 37 C.F.R. 1.16 or 1.17 to Deposit Account 50-2504. The Examiner is invited to contact the undersigned at 434-972-9988 to discuss any matter regarding this application.

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Respectfully submitted,

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